



## **Waste Sampling and Management Plan**

**Abatement and Selective Demolition  
130 Cedar Street  
New York, NY 10006**

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# Waste Sampling and Management Plan

## 1.0 Introduction

The objective of the Waste Sampling and Management Plan is to characterize, manage, containerize, and legally transport and dispose of waste streams that will be generated as part of the abatement and selective demolition of the building located at 130 Cedar Street, New York, NY 10006 ("the Building"). Activities described in the Waste Sampling and Management Plan are based on a preliminary evaluation of the conditions and materials observed in the Building. It is anticipated that a detailed assessment of the conditions and materials in the Building will be undertaken as one of the initial project activities. Additionally, it is anticipated that the Waste Sampling and Management Plan will be revised as the project progresses to ensure that project activities are consistent with applicable regulatory requirements and provides for protection of the public at large.

### 1.1 Abatement Phase

The abatement phase includes the cleaning and/or removal of all accessible contaminated interior surfaces and non-structural elements within the Building under containment. The abatement phase will occur under negative pressure containment and includes the following general categories: (a) the general area cleanup of WTC dust and debris; (b) removal and disposal of installed porous and certain non-porous building materials and components; (c) cleaning and salvage of certain installed non-porous building equipment and components; (d) removal of building materials containing asbestos which were present in the Building prior to September 11<sup>th</sup>, 2001; (e) packaging of asbestos and other regulated waste including, but not limited to light bulbs, lighting ballasts, batteries, mercury containing thermostats, etc. at generation points; (f) movement of containers to the decontamination unit and movement of decontaminated containers to waste loading.

### 1.2 Selective Demolition Phase

The selective demolition phase includes the deconstruction of the remaining cleaned interior and exterior walls and other non-structural elements.

### 1.3 Waste Determinations

An inventory of the materials to be removed from the Building; including their general character, regulatory classification, and approximate quantity will be undertaken as one of the initial activities during the project. The Environmental Consultant will examine and, if necessary, complete additional sampling and analysis, to characterize the each waste stream as it is generated. Based on the results of this characterization, and any analytical results received, the

Environmental Consultant will issue addenda to the Waste Sampling and Management Plan, if necessary. The Contractor or its authorized representative will ensure proper handling and disposal activities as described in this plan.

## **2.0 Building Components**

The waste sampling and management plan has been developed to address the removal of all building contents and components, including waste generated during the abatement phase (i.e., asbestos and contaminants of potential concern, removal abatement, and soft strip/interior gut) and the selective demolition phase (non-structural building elements). Anticipated waste streams are listed below. As necessary during the course of the project, additional contaminants and waste streams will be added to this list.

### **2.1 Contaminants**

- Asbestos Containing Building Material (ACBM)
- Lead Based Paint
- WTC Dust
- WTC Contaminated Porous Materials
- WTC Contaminated Non-porous Materials That Have Not Been Cleaned

### **2.2 Deconstruction Waste**

- Wall and Ceiling Plaster (TCLP of 5ppm Lead)
- Door Systems and Window Systems
- Wall masonry and tile
- Mechanical Electrical Plumbing (MEP) components including, but not limited to, heating, ventilation and air conditioning (HVAC) systems, plumbing, wiring, refrigeration equipment and kitchen components.

### **2.3 Miscellaneous Materials**

Due to the small scale of the Building and its systems, additional regulated and/or hazardous waste is anticipated to be very limited in nature and scope. Regardless, the Waste Sampling and Management Plan addresses the potential for regulated waste in the following categories:

- Light ballasts and potting material
- Refrigerants
- Fire extinguishers
- Occupants' items
- Accumulated waste

- Lead-sheathed electrical conductor

#### 2.4 Structure & Exterior/Interior Walls

At completion of the abatement phase, the majority of the interior and exterior walls of the Building will remain. The interior materials will have been pressure washed and spray-encapsulated as needed, and the exteriors will have been pressure washed.

The classification of building components and contents will be an ongoing effort and will be conducted by the Environmental Consultant in accordance with applicable New York City, New York State and federal laws, rules, and regulations.

### 3.0 Waste Characterization Strategy

Waste generated during the project will be characterized, managed, transported and disposed of in compliance with this Waste Sampling and Management Plan and applicable regulations.

For materials requiring sampling, a representative sampling strategy will be used as detailed in Section 4.0, and composite samples representative of the final waste streams will be collected. The locations and frequency of samples to be combined into composite samples shall be determined by the Environmental Consultant such that a representative sample of the waste type has been obtained. All sampling personnel shall be familiar with sample collection and waste storage protocols and shall have undergone Hazard Communication training in accordance with 29 CFR section 1910.1200 as well as being trained appropriately per the Health and Safety Plan.

The waste classification samples will be sent to a New York State Environmental Laboratory Approval Program (ELAP) certified (6 NYCRR Section 370.1(f)) and qualified laboratory for waste classification analysis (e.g., TCLP and RCRA characteristics) to determine appropriate waste classification and handling requirements (40 CFR section 262.11). Other sampling and laboratory analysis may be required by the disposal facility prior to waste acceptance. The laboratory subcontracted to perform the analysis will also be certified through the National Environmental Laboratory Accreditation Program (NELAP) for the analytical parameters being analyzed, so there is assurance that the laboratory has passed a nationally recognized quality assurance program that includes audits, analysis of blind performance samples to check data quality and meeting certain minimum technical standards for the qualifications of testing personnel.

Upon receipt of analytical results, determination of waste classification and identification of disposal facilities, the Environmental Consultant will identify applicable regulatory requirements for waste handling, worker training and protection (e.g., specific training/certifications, personal protection equipment), packaging (e.g., type of packaging, marking, labeling), transporting (e.g., placarding, shipping papers), waste routing and disposing of these wastes. Since

waste classification samples will be collected from in-place materials, on-site storage of structure and facade wastes for waste classification will not be required. Rather, all removed materials will be placed into their applicable disposal containers/vehicles for off-site shipment. All potentially hazardous waste will be managed as hazardous waste until analytical laboratory results are received. If the structural and/or wall components test as hazardous waste, they will be handled and disposed of as hazardous waste as a part of the abatement phase.

If greater than 100 kg/month of hazardous waste is generated during the deconstruction process, Contractor will comply with, among other regulations, 6 NYCRR Part 373, Subpart 373-3, Section 373-3.3(b).

If results of waste characterization sampling and analysis dictate that waste material must be managed and disposed of as both asbestos and hazardous waste, both asbestos and hazardous waste management and disposal requirements will be met.

### 3.1 Contaminants

Full-building visual surveys have been conducted, and in-place ACBM has been identified and located. No further characterization will be conducted unless site conditions reveal additional suspect materials not addressed in the ACBM surveys. WTC dust is assumed to exist at the site.

### 3.2 Deconstruction Waste

Deconstruction waste sampled and analyzed for RCRA characteristics will include:

- Wall and Ceiling Plaster
- Any building components/materials not currently identified as part of the initial confirmatory sampling event will be sampled during the abatement phase of the project as necessary.
- Personal protective equipment, filters, etc. will be assessed to determine their classification as waste and managed/disposed of appropriately.

### 3.3 Miscellaneous Materials

Due to the small scale of the Building and its systems, additional regulated and/or hazardous waste is anticipated to be very limited in nature and scope. Regardless, the Waste Sampling and Management Plan addresses the potential for regulated waste in the following categories:

- Light ballasts and potting material
- Refrigerants
- Fire extinguishers
- Occupants' items

- Accumulated waste

The Environmental Consultant will conduct daily inspections of the abatement work area to identify suspect components for segregation and testing and/or other determination.

Any material classified as “unknown” during the project will require sample collection and analysis for full RCRA characteristics in accordance with 40 CFR Part 261 and will be disposed of based upon the results of that sampling and the nature of the waste. If the material is classified as RCRA hazardous waste, additional sampling may be required for “total” concentrations of specific contaminants to determine whether the waste may be land filled or is restricted from land disposal pursuant to 40 C.F.R. Part 268; the analyses to be conducted will depend on the specific waste classification of the waste.

Used PPE and spent filters will be packaged, handled and disposed of as ACM waste.

If additional categories of waste are observed during the work that are suspected to have different waste characteristics than those sampled, these materials will be sampled for waste characterization prior to removal. Materials similar in composition and WTC impact to those sampled would then not be sampled for RCRA characteristics unless there is an independent concern that they might be hazardous waste due to the inherent composition of the component, subcomponent or waste stream (e.g., light ballasts which may contain PCBs, items coated with lead-based paint).

Porous deconstruction waste will be disposed of according to the results of waste characterization sampling, if necessary, and as ACM at a minimum.

Non-Porous Deconstruction Waste may be managed by either of two options. The abatement Subcontractor may choose to clean the nonporous surfaces in accordance with procedures outlined in the Specification for Abatement and Selective Demolition.

The resulting cleaned material will not be sampled unless it is painted; in that instance, sampling will be performed as described in Section 6.0. Alternatively, based on field conditions and decisions regarding the use of its labor force, the Abatement Subcontractor may choose to not clean the surfaces and instead manage those un-cleaned non-porous materials as asbestos waste at a minimum or otherwise, if required, as determined by the RCRA characteristics sampling.

Porous and non-porous miscellaneous materials will be handled, packaged and disposed in the same manner as demolition wastes as described in Section 3.2.

Those miscellaneous materials specified in Section 2.3 that were not sampled as part of the initial confirmatory sampling event will be sampled as specified in Sections 5.2 and 5.3 during the abatement phase of the project.

### 3.4 Structure & Exterior/Interior Walls

At completion of the abatement phase the majority of the interior and exterior walls of the building will remain. The interior materials will have been pressure washed and spray-encapsulated as needed, and the exteriors will have been pressure washed.

## 4.0 Analytical Methodologies

If testing is deemed necessary, waste characterization will be performed according to the following methodologies. Where more than one method is identified, each analytical method is valid per the regulations. All allowable methods are included in this plan to allow for flexibility in selecting an analytical laboratory or laboratories.

### 4.1 Ignitability

The characteristic of ignitability carries the RCRA waste code of D001, and may be analyzed for using American Society of Testing Materials (ASTM) method D-93-79 or D-93-80 or D-3278-78.

### 4.2 Corrosivity

The characteristic of corrosivity carries the RCRA waste code of D002, and may be analyzed using Method 9045D or 9040C as set forth in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. SW-846 method 9040 C is for aqueous wastes and multiphase waste where the aqueous phase constitutes at least 20% of the total volume of the waste; 9045D is for soils and waste samples where the waste may be solids, sludges, or nonaqueous liquids. The aqueous phase must be less than 20% of the total volume of the waste. National Association of Corrosion Engineers (NACE) Standard TM-01-69 as standardized in SW-846 shall be utilized to evaluate corrosion rate if the suspected corrosive hazardous waste is a liquid.

### 4.3 Reactivity

The characteristic of reactivity carries the RCRA waste code of D003, and may be analyzed using the analytical methods outlined in sections 7.3.3.2 or 7.3.4.2 of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. The referenced sections are from SW-846 Chapter Seven: Characteristics Introduction and Regulatory Definitions. They are specifically for Reactivity. Chapter Seven was revised to reflect the withdrawal of the reactive cyanide and sulfide guidance in sections 7.3.3 ("Interim Guidance for Reactive Cyanide") and 7.3.4 ("Interim Guidance for Reactive Sulfide"), and to replace certain characteristic explanatory text with referrals to the regulations themselves. This change can be found in the Proposed Update IIIB to SW-846.

#### 4.4 Toxicity

The characteristics of toxicity carry the RCRA waste codes of D004 through D043. Each waste code identifies the specific chemical component for which the waste is classified as toxic. The samples to be analyzed for the characteristic of toxicity must be prepared using the Toxicity Characteristic Leaching Procedures (TCLP) per Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. The analytical method applied to the resulting leachate depends on the type of chemical being analyzed for, as follows:

- Volatile organic compound (VOC) toxic constituents will be analyzed by Method 8260B of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. VOC toxic constituents include benzene (D018), carbon tetrachloride (D019), chlorobenzene (D021), chloroform (D022), 1,4-dichlorobenzene (D027), 1,2-dichloroethane (D028), 1,1-dichloroethylene (D029), methyl ethyl ketone (D035), tetrachloroethylene (D039), trichloroethylene (D040), and vinyl chloride (D043).
- Semivolatile organic compound (SVOC) toxic constituents will be analyzed by Method 8270C of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. SVOC toxic constituents include 2,4-dinitrotoluene (D030), hexachlorobenzene (D032), hexachlorobutadiene (D033), hexachloroethane (D034), o-cresol (D023), m-cresol (D024), p-cresol (D025), cresol (D026), nitrobenzene (D036), pentachlorophenol (D037), pyridine (D038), 2,4,5-trichlorophenol (D041), and 2,4,6-trichlorophenol (D042).
- Pesticide toxic constituents will be analyzed by Method 8081A of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. Pesticide toxic constituents include chlordane (D020), endrin (D012), heptachlor and its epoxide (D031), lindane (D013), methoxychlor (D014), and toxaphene (D015).
- Herbicide toxic constituents will be analyzed by Method 8151A of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. Herbicide toxic constituents include 2,4-D (D016) and 2,4,5-TP (also known as Silvex, D017).
- Mercury (D009) will be analyzed by Method 7470A (aqueous samples) of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846.
- Metals/inorganics other than mercury will be analyzed by Method 6010B, or Method 6020 of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846. These

constituents include arsenic (D004), barium (D005), cadmium (D006), chromium (D007), lead (D008), selenium (D010), and silver (D011).

Generally, building components would not be considered as possible RCRA characteristic wastes except for the potential that exists due to impacts by WTC dust. The notable exceptions to this would be painted surfaces (which would typically be sampled for TCLP RCRA Metals), as well as miscellaneous materials containing hazardous components (i.e., transformers, ballasts, lamps, lead-sheathed electrical cable) prior to the WTC event.

The results of RCRA characteristic analyses, the classification of the material based on historical information, as well as the material's status as presumptively asbestos-contaminated, will be used as the basis for the Waste Profile for the particular waste stream.

## **5.0 Sampling Frequencies and Disposal**

### **5.1 Contaminants**

Asbestos Containing Building Materials (ACBMs) at the site have been identified and located. Limited WTC dust sampling has been conducted. Further WTC dust will be identified, and further sampling will be conducted to support waste classification prior to removals off-site. Representative samples of dust will be collected and composited for analysis. These results will be available prior to the commencement of site work. Disposal will be according to the waste characterization sampling, and as ACM at a minimum.

### **5.2 Deconstruction Waste**

For each of the deconstruction waste materials listed in Section 2.2, a minimum of five confirmatory waste samples will be collected from different locations and functional spaces in the Building. The samples will be composited for analysis (one analysis per material). Preliminary sampling has been conducted.

Initial confirmatory RCRA 8 Metals, TCLP sampling and analysis has been performed on painted wall plaster and wall masonry and tile. These initial results show leachable levels below the regulatory limits.

Deconstruction waste materials not sampled as part of the initial confirmatory sampling event, and those building components that the regulators deem need to be re-sampled, if necessary, based on its review of the confirmatory sampling analytical results, will be sampled and analyzed using applicable testing methods as specified in Section 4.0 during the abatement phase of the project. Results will be available prior to the commencement of site removals. Disposal will be according to the waste characterization sampling and as ACM at a minimum.

### 5.3 Miscellaneous Materials

Due to the small scale, and simple use of the building and its systems, additional miscellaneous regulated and/or hazardous waste is anticipated to be very limited in nature and scope. The Environmental Consultant will conduct daily inspections of the abatement work area to identify suspect components for segregation and testing and/or other determination. The Environmental Consultant will make determinations as to the appropriate testing required to characterize any materials encountered. Where possible, each floor of each building will be represented within any composite sample of miscellaneous waste, and the minimum of five grab samples to be composited will be observed.

#### 5.3.1 Light Ballasts and other PCB Wastes

During deconstruction activities, as ballasts are removed from lighting fixtures, the Abatement Subcontractor shall clean the surfaces of dust and containerize ballasts for disposal as PCB waste. All ballasts, including those labeled "No PCB" will be containerized for disposal as PCB waste due to the presence of potting material. For potentially PCB-containing equipment other than ballasts, PCB samples may be required to determine whether the dielectric fluid contains more than 50 parts per million (ppm) PCBs, which would make the equipment subject to the PCB regulations. SW-846 Method 8082, Analysis of Polychlorinated Biphenyls by Gas Chromatography is specified by regulation for determining the concentration of PCBs in wastes.

Ballasts (all assumed to contain PCBs) shall be handled, packaged and labeled as required for disposal as a PCB regulated waste. Other wastes potentially containing PCBs, such as caulking, will be assessed during the initial detailed inventory to determine which, if any, should be managed as PCB containing material. All hauler, transportation and disposal facility requirements shall also conform to the requirements for this category of waste.

Shipments of PCB waste must be in properly labeled and marked containers, the waste must be shipped under a properly executed manifest and Land Disposal Restriction (LDR) form, the transporter must have a valid EPA Identification number and must have a valid New York State Part 364 transporter permit as well as the latest version of U.S. Department of Transportation's Emergency Response Guide (2004). The vehicle in which PCB wastes are being shipped must be properly placarded and marked to reflect that it is transporting PCBs and must also be marked with the New York State waste transporter permit number on its sides and rear.

Disposal facilities that accept PCB wastes must have an EPA Identification number and have received TSCA authorization from the EPA and any additional state permits for the disposal/management of PCBs applicable to the state in which the facility is located. The disposal facility must comply with all manifesting requirements specified in the regulations and must prepare a certificate of destruction and send it to the generator or the generator's agent.

### 5.3.2 Universal Waste

Only minor quantities of materials that could be categorized as Universal Waste are anticipated to be encountered at this site. For those materials encountered, the Abatement Subcontractor shall clean the surfaces of dust. In the event that such materials are encountered, they are addressed by this WMP.

40 CFR Part 273 and 6 NYCRR Section 374.3 establish requirements for managing universal wastes. Universal wastes are those wastes that would reasonably be expected to be classified as hazardous wastes but, due to their universal use in industrial and residential properties, regulations were created that would ensure that they were managed in a manner that prevented harm to the environment while reducing the regulatory burden on generators of these wastes. Universal wastes include the following waste types:

- Batteries as described in 40 CFR section 273.2 and 6 NYCRR Section 374-3.1(b)
- Pesticides as described in 40 CFR section 273.3 and 6 NYCRR Section 374-3.1(c)
- Thermostats as described in 40 CFR section 273.4 and 6 NYCRR Section 374-3.1(d)
- Lamps as described in 40 CFR section 273.5 and 6 NYCRR Section 374-3.1(e)
- Refrigerant-containing Equipment

Given that such wastes will be minor in quantity at this site, these wastes, if encountered, will be managed according to hazardous waste regulations.

Non-hazardous construction and demolition materials may contain regulated refrigerant including, but not limited to, possible refrigerant in the air conditioning and refrigeration systems. The refrigerant will be removed prior to disposal. Refrigerant-containing equipment would be considered an appliance and is excluded from definition of C&D debris. For refrigerant-containing equipment the following procedures shall be followed:

- Verify refrigerant has been removed. If not, a licensed refrigerant removal service must be called to properly dispose of refrigerant.
- Equipment that contains refrigerant will be HEPA vacuumed and wet-wiped before being staged in a clearly demarcated on-site area until the refrigerant has been removed by a licensed refrigerant removal service.
- Remove door on refrigerators and freezers.

- After removal of refrigerant and otherwise rendering the appliance safe, recycle or dispose of the appliances as scrap metal or as municipal solid waste, respectively.

#### 5.3.3 Accumulated Waste

The building currently contains miscellaneous accumulated waste, primarily associated with previous abatement work and pre-event lessees. These materials will be inspected, categorized (i.e., cleaning supplies, lubricants) and sampled for RCRA characteristics. These materials will be disposed of according to the results of the waste characterization sampling and as asbestos-containing wastes at a minimum. Further sampling, if deemed appropriate by EPA will be conducted immediately.

#### 5.3.4 Fire Extinguishers

In the case of both charged and discharged fire extinguishers, the manufacturer of the fire extinguisher will be contacted for the proper discharge and disposal method. Alternately, local fire department(s) may be contacted to determine if they would like to acquire the charged fire extinguishers in volunteer or community training exercises. If the above approaches prove impractical, fire extinguishers shall be depressurized in accordance with manufacture's recommendations and all regulatory requirements. Contained media shall be collect upon depressurization, characterized, and recycled or disposed, if and as required. Empty extinguisher bodies shall be rendered inoperable by cutting in half or puncturing, then recycling as scrap metal or disposing as municipal solid waste. If fire extinguishers are found, the Environmental Consultant will make a determination.

#### 5.3.5 PPE/Filters

PPE/Filters will be assessed to determine their classification as waste. Initial RCRA TCLP characterization will be performed to ensure that they are disposed of in accordance with applicable hazardous waste regulations. If not classified as hazardous or other special waste, these materials will be disposed of as asbestos contaminated waste.

#### 5.3.6 Lead Sheathed Electrical Conductors

Lead sheathed conductors will be assessed to determine their classification as waste. If lead sheathing is found in the Building, they will either be recycled or initial RCRA TCLP characterization sampling and analysis will be performed and based upon these results these items will be disposed of appropriately.

#### 5.4 Structure & Exterior/Interior Walls

If necessary, sampling of the structure and wall materials will be conducted to confirm the waste status of the structure and the walls prior to commencement of the selective demolition phase. For each of the structural and wall material categories noted at the site, five confirmatory waste samples will be collected and composited for analysis. Samples will be collected from various locations and functional spaces within each building. Results will be available prior to the

commencement of the selective demolition phase. Disposal will be according to the waste characterization sampling.

## **6.0 Non-Porous (Cleanable) Waste**

For cleaned (wet-wiped/HEPA-vacuumed) non-porous deconstruction waste, TCLP Metals samples will not be collected unless the non-porous components are painted and to be disposed of (i.e., not recycled). Cleaned painted scrap metals that are recycled are exempt from the below described waste characterization sampling and analysis. For non-porous components that are painted, one composite sample made up of a minimum of four grab samples of each distinct painted non-porous building component (based on paint color, building component type and zone in which the component is located) will be collected for TCLP RCRA metals analysis. Each grab sample will be collected as a core sample (i.e., both painted surface and building component matrix) and sent to the laboratory for analysis with a Chain-of-Custody.

Likewise, cleaned, painted, non-porous deconstruction waste with TCLP RCRA metals results of less than applicable standards would also be classified, managed and recycled/disposed of as non-hazardous construction and demolition (C&D) debris.

Cleaned, painted, non-porous deconstruction waste with TCLP RCRA metals results greater than applicable standards would be classified, managed and disposed of as hazardous waste with the toxicity characteristic of the exceeded RCRA Characteristic.

Cleaned, unpainted, non-porous deconstruction waste will be visually inspected by the Environmental Consultant, and may be recycled and/or disposed as C&D waste if TCLP metals analyses of surface dust wipes are less than the applicable standards. Materials that exceed the applicable standards will be packaged, handled and disposed in accordance with the regulation applicable to their category of waste. The Environmental Consultant will make determinations on representativity of waste sampling based on the quantity and nature of such wastes encountered.

Non-cleaned, non-porous deconstruction waste will be disposed of as asbestos waste at a minimum for the reasons indicated previously. Should results of the settled dust classification sampling indicate that the dust results exceed the regulatory threshold for one or more RCRA characteristics, non-cleaned, non-porous items originating from areas where dust exceeded the threshold would be categorized and handled according to those results. If the dust characterization was not conclusive at the original location in the building of this class of material the item(s) would be subject to bulk or core or wipe sampling for RCRA characteristics prior to disposal. If a significant number of these items originate from the same functional area of the building and further testing was deemed appropriate based on the dust characterization testing, bulk or core or wipe sampling on at least 10% of the items, but not less than five items, would be conducted. If bulk or core or

wipe sample results indicate that the materials exceed the regulatory threshold for one or more RCRA characteristics, the waste will be managed as both a RCRA waste of the appropriate waste code as well as asbestos waste.

## **7.0 Waste Packaging & Storage**

Locked waste storage areas will be established in the Building near the exit/decontamination units to accommodate both categorized waste awaiting transport and suspect waste awaiting analyses. Storage areas will be plasticized, and any liquid storage will have secondary containment. Storage areas will be secured to prevent unauthorized access or removal of waste. (See Site Logistics Plan in Section 2.0, subsection 2.6, Appendix F) Incompatible waste streams will be segregated, and waste labeling and signage will be in strict accordance with regulations. Within the storage area, posted signs, labeled accumulation start dates, labeled description of the waste, aisle space, proper segregation of incompatible and or/ignitable waste, etc. will be inspected on a daily basis by the Environmental Consultant.

All containers at the Building will have proper labeling, which includes information such as waste type and accumulation date.

### **7.1 Hazardous Waste**

Hazardous waste will be placed in containers made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored so that the ability of the container to contain the waste is not impaired (e.g., USDOT approved drums, bags, roll-off containers) and transferred to the waste storage area pending transport. While being accumulated on-site, each container shall be labeled or marked clearly with the words, "Hazardous Waste". Containers will be inspected at least weekly to identify any leaks, and/or deterioration caused by erosion or other factors, and to ensure containers are not over-packed. Hazardous waste will not be placed in an unwashed container that previously held an incompatible waste. Any disposal container holding a hazardous waste that is incompatible with any waste or other materials contained nearby will be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

### **7.2 Universal Waste**

Universal waste will be handled, packaged, and stored pending transport according to all regulations governing universal wastes. Refer to Section 7.1.

### **7.3 Asbestos Waste**

Waste containing asbestos will be wet down to prevent visible emissions of asbestos dust into the air. The asbestos waste will be sealed while wet in a leaktight container. A supply of leak tight containers will be kept in the waste storage area to provide adequate repackaging if a break in the container should occur. Storage area shall be maintained under a negative pressure ventilation system. ACM packaging

and waste decontamination procedures will be in accordance with Title 15 Chapter 1 of the Rules of the City of New York. Daily inspections of the waste storage area shall be required.

Storage of asbestos waste will not exceed 50 cubic yards. Authorization from the New York City Department of Sanitation (NYCDOS) and additional requirements, per code, will be required if accumulation of asbestos is anticipated to be greater than 50 cubic yards. Containers holding asbestos waste will be inspected daily to ensure no visible emissions of asbestos dust in the air or breaks in the container.

#### **7.4 Exterior Wash Water**

Wash water collected per the Specification for Abatement and Selective Demolition shall be pumped to new, clean 55-gallon drums. Aliquots from each drum of wash water will be collected. Each composite sample will be analyzed for RCRA characteristics and will be tested as required to comply with NYC DEP Title 15 Chapter 19 (Use of the Public Sewer) Subchapter 19-04. If the water is not regulated under RCRA, and if it meets NYC DEP discharge criteria, it will be filtered through a 5 micron filter prior to disposal to the NYC sewer system per NYC Title 15, Part 1-82 (b) 1. If testing indicates the water is regulated under RCRA, it will be handled, packaged and disposed of in strict accordance with its categorization. Until its determination as hazardous waste, it will be stored in the ACM waste decontamination unit as permitted by NYC DEP Title 15. All filtration media and PPE associated with this operation will be handled as ACM waste at a minimum pending HazWaste determination. All required NYCDEP permits will be obtained for disposal into the NYC sewer system.

#### **7.5 PCB Waste**

Non-leaking PCB waste (i.e., PCB bulk product waste, including fluorescent light ballasts) will be packaged in suitable containers, properly labeled and stored for transport in the Waste Storage Area. Any leaking PCB articles or containers will be transferred to properly marked, non-leaking containers or an over-pack container, and likewise labeled and stored for transport.

### **8.0 Transportation Requirements**

All waste materials will be transported in accordance with applicable local, state and federal DOT regulations including, but not limited to, bills of lading, manifests, placards, etc. All wastes will be shipped using properly permitted vehicles operated by drivers with Commercial Drivers Licenses (CDLs) and Hazardous Materials endorsements. All hazardous waste will be shipped using transporters with RCRA identification numbers. The actual modes of transportation to be utilized will be determined following the identification of all anticipated waste streams and will take into account the location and distance to the selected disposal facility as well as cost considerations. All off-site shipments of waste will adhere to the site-specific transportation requirements. As required by NYSDEC (6 NYCRR

Part 364) all hazardous and asbestos wastes will be transported using Part 364 permitted haulers.

## 9.0 Travel Routes

Travel route(s) will be determined following discussion with the appropriate regulatory agencies (e.g., New York City Department of Transportation), and the Lower Manhattan Construction Command Center (LMCCC). The selected waste transporter(s) will follow the designated travel routes.

## 10.0 Disposal Facilities

Waste recycling/disposal facilities will be selected based on several factors including waste types, facility acceptance criteria, regulatory compliance history. Potential facilities to be used include:

- Asbestos

Meadowfill Landfill

Route 2, Box 68, Bridgeport, WV 26330

Permit # SWF-1032/WV0109193

- Lead - Recyclable

RCRA Exceedance: Republic Environmental Systems

2269 Sandstone Dr., Hatfield, PA 19440

EPA ID 085690592

- Tanks

Republic Environmental Systems

2269 Sandstone Dr., Hatfield, PA 19440

EPA ID 085690592

Only those facilities that have valid federal/state/local permits to accept the waste type proposed for recycling/disposal at the facility will be used.

## 11.0 Documentation

All applicable local, state and federal documentation and record keeping requirements/guidelines will be followed. Documentation for hazardous waste disposal includes hazardous waste determination documentation including all analytical results, Hazardous Waste Manifesting, EPA Generator ID, EPA transporter ID, EPA ID for waste disposal facility and waste storage locations and capacities. Also documented will be emergency notification and operating procedures, organizational chart, unexpected waste procedures, contractor involvement list and copies of the regulatory requirement certifications of transporters, disposal facilities, etc. Specific regulatory documentation may change depending on the types and amounts of waste to be generated. The Contractor shall

be responsible for document management. All documentation noted under this section shall be retained for a period of not less than three years after the completion of the project.